NASA Weekly Update

Week of September 5 - 11, 2006

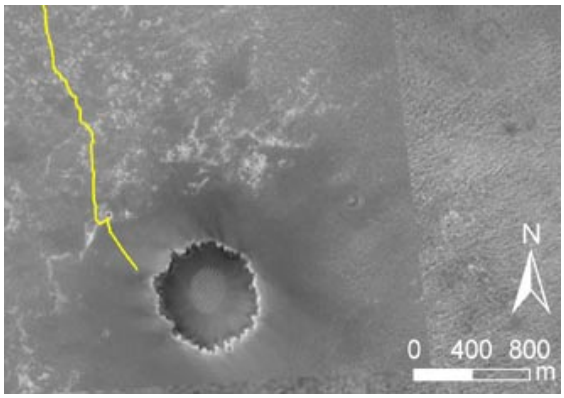
9-11: Expedition 13 Welcomes STS-115 Aboard Station: The six STS-115 astronauts entered the International Space Station for the first time at 8:30 a.m. EDT where they were greeted by the station's Expedition 13 crew. The two crews are now turning

The Expedition 13 crew welcomes the STS-115 crew aboard the International Space Station.

their attention to beginning STS-115's major task at the station, the installation and outfitting of the P3/P4 integrated truss structure and solar arrays. STS-115 is the first station assembly mission since STS-113 in late 2002. Mission Specialists Joe Tanner and Heidemarie Stefanyshyn-Piper are scheduled to begin a new pre-spacewalk procedure called "camping out" when they enter the station's Quest Airlock at about 2:40 p.m. They will stay in the Airlock until they start the mission's first spacewalk Tuesday morning. "Camping out" helps the spacewalkers to begin the spacewalk earlier by reducing the amount of time typically required for the pre-breathe exercise and some spacewalk preparations. For more information on the STS-115 mission, visit: www.nasa.gov/shuttle.

9-10: NASA TV and Web Coverage of Shuttle Atlantis Mission: NASA is providing round-the-clock television and Internet coverage of Space Shuttle Atlantis' mission, STS-115, to the International Space Station. NASA Television features live mission events, daily status news conferences and 24-hour commentary. NASA TV is webcast at: http://www.nasa.gov/ntv. NASA web coverage of STS-115 includes the latest mission information, interactive features and news conference images, graphics and videos. The latest NASA TV schedule of mission coverage also is available on the main space shuttle Web site: http://www.nasa.gov/shuttle.

9-6: NASA Rover Nears Martian Victoria Bowl Goal: NASA's Mars rover Opportunity is closing in on what may be the grandest overlook and richest science trove of its long mission. During the next two weeks, the robotic geologist is likely to reach the rim of a hole



Victoria is the large crater near the bottom of this map. The gold line traces Opportunity's path nearly to Victoria.

in the Martian surface wider and deeper than any it has visited. The crater, known as "Victoria," is approximately one-half mile wide and 230 feet deep. Images from NASA's Mars Global Surveyor orbiter show the crater walls expose a stack of rock layers approximately 100 to 130 feet thick. Opportunity will send back its initial view into the crater as soon as it gets to the rim. For rover images and information, visit: http://www.nasa.gov/rovers.

9-7: NASA Hosts Arctic Sea Ice Media Teleconference: NASA is hosting a media teleconference where scientists will discuss recent changes in Arctic sea ice and links to climate changes. The teleconference is Wednesday, Sept. 13, at 1 pm EDT. Briefing participants:
- Mark Serreze, senior research scientist, National Snow and Ice Data Center
- Josefino Comiso and Claire Parkinson, senior research scientists, Cryospheric Sciences Branch, NASA's Goddard Space Flight Center, Greenbelt, Md.
Images and supporting data will be available during the teleconference at: http://www.nasa.gov/vision/earth/environment/seaice_telecon.html.

Weekly Status Reports

Space Shuttle

Discovery
Mission: STS-116 - 20th International Space Station Flight (12A.1) -
P5 Truss Segment
Vehicle: Discovery (OV-103)
Location: Orbiter Processing Facility Bay 3 Launch Date: No earlier than Dec. 14, 2006 Launch Pad: 39B Crew: Polansky, Oefelein, Curbeam, Higginbotham, Patrick, Fuglesang and Williams Inclination/Orbit Altitude: 51.6 degrees/122 nautical miles

Processing of Discovery for its next mission, STS-116, continues in Orbiter Processing Facility bay 3. Work was interrupted last week by the arrival of Tropical Storm Ernesto, but the vehicle is now configured for normal operations, and system testing on the main propulsion system continues. Preparations for removal and replacement of auxiliary power unit No. 3 are in work. The brake anti-skid and nose wheel steering testing is in work. Final closeouts are under way to complete installation of the orbiter's drag chute.

Endeavour
Powered-up system testing continues on Endeavour in Orbiter Processing Facility bay 2 following an extensive modification period. Work was interrupted last week by the arrival of Tropical Storm Ernesto, but the orbiter is now configured for normal work and technicians are performing electrical tests on the remote manipulator system (shuttle arm) pedestal wire harnesses. Rigging of the orbiter boom sensor system pedestals is under way. Workers continue to remove and replace gap fillers in the high priority areas of the orbiter's underside.

Expendable Launch Vehicles (ELV)

Mission: STEREO (Solar Terrestrial Relations Observatory)
Launch Pad: 17-B, Cape Canaveral Air Force Station
Launch Vehicle: Boeing Delta II
Launch Date: No earlier than Oct. 18, 2006
Launch Time: TBD

A decision was made to remove the STEREO second stage from the launch vehicle and perform inspection from inside the propellant tank to verify it is structurally sound for flight. The launch of STEREO is now targeted for no earlier than Oct. 18. An electrical checkout of the vehicle is under way due to lightning strikes within a one-third mile radius of Complex 17 during the passing of Tropical Storm Ernesto.

The STEREO observatories remain at the Astrotech Space Operations Facility. Today technicians removed the transportation canister from around the payload to begin the process of reconditioning the batteries and preparing for the storage period (currently about 30 days). The twin spacecraft will remain in storage until the necessary course of action for the Delta II can be more clearly defined. There was no effect on the STEREO spacecraft from Tropical Storm Ernesto.

Upcoming Events

- **Sept 13, 6:30 p.m.:** ICE ON EARTH: New Windows on our Frozen World at the National Air and Space Museum
- **NET Sept. 14:** Launch of Expedition XIV crew on Soyuz TMA-9 at Baikonur Cosmodrome, Kazakhstan
- **NET Oct. 18:** STEREO launch at Cape Canaveral Air Force Station, FL.
- **NET Nov 13:** Air Force Research Laboratory's TacSat 2 satellite launch from NASA Wallops Flight Facility, Wallops Island, VA